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Solid State Relays
G3FM

CSM_G3FM_DS_E_5_5

100-μA-max. Leakage Current, No Bleeder Resistor Required

- Reduces wiring work by 60% when combined with the PFY-08-PU Push-In Plus Socket (according to actual OMRON measurements).
- 1 mA to 500 mA micro-load switching.
- Switch to both AC and DC with no polarity.
- Switch for a wide range of voltages; 19.2 to 264 VAC, 19.2 to 125 VDC.
- Switch full- and half-wave rectifier AC loads.
- Same sizes and terminal arrangements as OMRON Power Relay MY Series.
- Switch MY Series (without bleeder resistor).
- Superior surge absorption with a built-in varistor.
- Optimum SSR to control minute load, valves, and solenoids.

⚠ Refer to *Safety Precautions for All Solid State Relays*.



Note: The socket is optional.

Model Number Structure

■ Model Number Legend

G3FM-□□□□□
1 2 3 4 5 6

1. **Basic Model Name**
   G3FM: Solid State Relay
2. **Rated Load Power Supply Voltage**
   2: 200 VAC
3. **Rated Load Current**
   R5: 0.5 A
4. **Terminal Type**
   S: Plug-in terminals
5. **Zero Cross Function**
   L: Not equipped with zero cross function
6. **Operation Indicator**
   N: Equipped with operation indicator

Ordering Information

■ List of Models

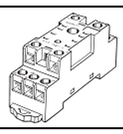
Isolation	Zero cross function	Indicator	Rated output load	Rated input voltage	Model
Photo-voltage coupler	No	Yes	0.5 A at 24 to 240 VAC 0.5 A at 24 to 110 VDC	5 VDC	G3FM-2R5SLN
				12 VDC	
				24 VDC	

Note: When ordering, specify the rated input voltage.

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■ Accessories (Order Separately)

Connection Sockets

Classification	Terminal type	Appearance	Model
Front-mounting	Screw terminals (Terminal cover structure) *		PYFZ-08
	Screw terminals (finger protection structure)		PYFZ-08-E
	Screw terminals (finger protection structure)		PYF08A-N
	Push-In Plus terminal blocks (Socket combination)		PYF-08-PU
Back-mounting	Relays with PCB Terminals		PY08-02

* Terminal cover type is PYCZ-C08. (Order Separately) For details, refer to the *Terminal Covers*.

Refer to *Common Socket and DIN Track Products for details on Connection Sockets and DIN Track products (sold separately)* of your OMRON website.

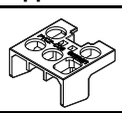
Refer to *PYF□□-PU/P2RF-□□-PU for details on A Push-In Plus Terminal Block Socket* of your OMRON website.

Hold-down Clips

Applicable Socket			Hold-down Clips
Classification	Terminal type	Model	Model
For front-mounting	Screw terminals	PYFZ-08	PYC-A1 *
	Screw terminals (finger protection structure)	PYFZ-08-E	
	Screw terminals (finger protection structure)	PYF08A-N	
For back-mounting	Relays with PCB Terminals	PY08-02	PYC-P

* PYC-A1 is provided with two clips.

Terminal Covers

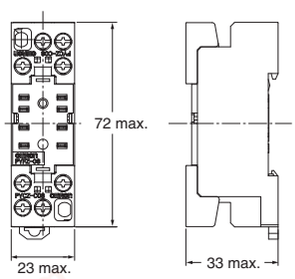
Applicable Socket	Terminal Covers	
Model	Appearance	Model
PYFZ-08		PYCZ-C08 (2 pcs/set)

Note: Use these covers in a combination with PYFZ-08.

Dimensions with terminal cover **(Unit: mm)**

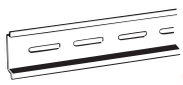
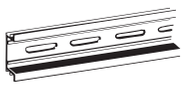
PYCZ-C08





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DIN Track Mounting Parts

Classification/ division	Type		Appearance	Model
For front-mounting	DIN Tracks	Shallow type, total length: 1 m		PFP-100N
		Shallow type, total length: 0.5 m		PFP-50N
		Deep type, total length: 1 m		PFP-100N2
	End Plate			PFP-M
	Spacer			PFP-S

Specifications

■ Ratings (at an Ambient Temperature of 25°C)

Model	Input					Output			
	Rated voltage	Operating voltage	Impedance	Voltage levels		Applicable load			
				Must operate voltage	Must release voltage	Rated load voltage	Load voltage range	Load current	Inrush current
G3FM-2R5SLN	5 VDC	4 to 6 VDC	250 Ω±20%	4 VDC max.	1 VDC min.	24 to 240 VAC 24 to 110 VDC	19.2 to 264 VAC 19.2 to 125 VDC	1 to 500 mA at 40°C	6 A (10 ms)
	12 VDC	9.6 to 14.4 VDC	600 Ω±20%	9.6 VDC max.					
	24 VDC	19.2 to 28.8 VDC	1.2 kΩ±20%	19.2 VDC					

■ Characteristics

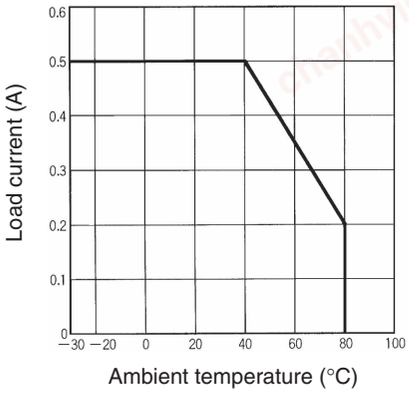
Operate time	5 ms max.
Release time	10 ms max.
Output ON voltage drop	3 V (RMS) max.
Leakage current	0.1 mA max. (at 200 VAC)
Insulation resistance	100 MΩ min. (at 500 VDC)
Dielectric strength	1,500 VAC, 50/60 Hz for 1 min
Vibration resistance	10 to 55 to 10 Hz, 0.75-mm single amplitude
Shock resistance	1,000 m/s^2
Ambient temperature	Operating: –30°C to 80°C (with no icing or condensation) Storage: –30°C to 100°C (with no icing or condensation)
Ambient humidity	Operating: 45% to 85%
Weight	Approx. 50 g

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Engineering Data

Load Current vs. Ambient Temperature Characteristics

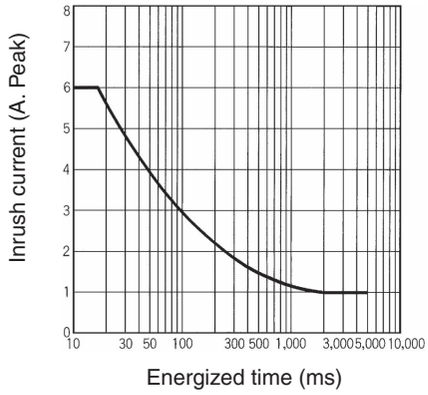
G3FM-2R5SLN



One Cycle Surge Current: Non-repetitive

Non-repetitive (Keep the inrush current to half the rated value if it occurs repetitively.)

G3FM-2R5SLN

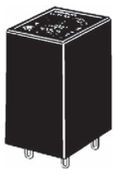


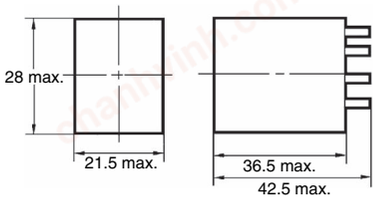
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Dimensions

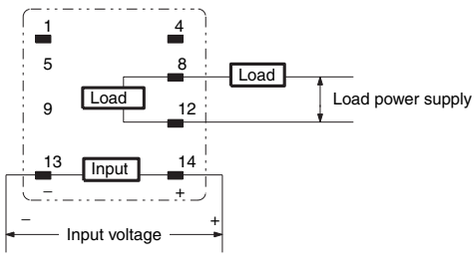
Note: All units are in millimeters unless otherwise indicated.

■ Relay





Terminal Arrangement/Internal Connections (Bottom View)



■ Accessories (Order Separately)

Connection Socket

Hold-down Clips

Terminal Covers

DIN Track Mounting Parts

Refer to *Products Related to Common Sockets and DIN Tracks for precautions on the applicable Sockets* of your OMRON website.

Refer to *PYF-□□-PU/P2RF-□□-PU for precautions on Push-In Plus Terminal Block Sockets* of your OMRON website.

Safety Precautions

Be sure to read 'the Common Precautions' in the website at the following URL: *http://www.ia.omron.com/*.

Refer to the *Common Solid State Relay Precautions for common precautions* of your OMRON website.

Refer to *Products Related to Common Sockets, Terminal Covers and DIN Tracks for precautions on the applicable Sockets* of your OMRON website.

Refer to *PYF-□□-PU/P2RF-□□-PU for precautions on Push-In Plus Terminal Block Sockets* of your OMRON website.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.
To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.

In the interest of product improvement, specifications are subject to change without notice.

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